

CLAIMS

1. A system for managing a moveable media library, said system comprising:
at least one robotic mechanics; and
a controller, said controller comprising a processor for executing instructions and non-volatile memory for storing at least:
 - code for controlling said at least one robotic mechanics; and
 - code for responding to commands received from host systems to retrieve a moveable medium of a plurality of moveable media, said code for responding is operable to receive said commands addressed with multiple device identifiers according to a device access protocol, and said code for responding is operable to associate each device identifier of said multiple device identifiers with at least one respective library partition.
2. The system of claim 1 wherein said at least one robotic mechanics is operable to retrieve a moveable medium of a plurality of moveable media and to place said moveable medium into one of a plurality of media elements.
3. The system of claim 1 wherein said device access protocol is Fibre Channel and wherein said multiple device identifiers are Fibre Channel addresses.
4. The system of claim 3 further comprising:
a Fibre Channel switch that is operable to route Fibre Channel packets addressed with said multiple device identifiers to said controller.
5. The system of claim 1 wherein said device access protocol is a Small Computer System Interface (SCSI) protocol.
6. The system of claim 5 wherein said multiple device identifiers are SCSI logical units (LUNs).

7. The system of claim 1 wherein said non-volatile memory further comprises:
code for accessing a resource mapping table that assigns library resources to a
respective library partition.

8. The system of claim 7 wherein said resource mapping table is stored in said
non-volatile memory.

9. The system of claim 1 wherein said non-volatile memory further comprises:
code for identifying a respective virtual robotics mechanism peripheral in response to
a device identification query addressed with each of multiple device identifiers pursuant to
said device access protocol.

10. A method for managing a moveable media library, said method comprising:
assigning resources of said moveable media library to partitions of a plurality of
partitions;

assigning at least one partition of said plurality of partitions to each communication
medium identifier of a plurality of communication medium identifiers;

receiving a device access command, at a robotics controller, from a host system
addressed with one of said plurality of communication identifiers; and

determining a partition of said plurality of partitions utilizing said one of said plurality
of communication medium identifiers.

11. The method of claim 10 wherein said plurality of communication medium
identifiers are Fibre Channel addresses.

12. The method of claim 10 wherein said plurality of communication medium
identifiers are Small Computer System Interface (SCSI) identifiers.

13. The method of claim 10 wherein said step of determining comprises:
accessing a resource mapping table that assigns library resources to respective library partitions.

14. The method of claim 13 wherein said resource mapping table is stored in non-volatile memory of said robotics controller.

15. The method of claim 11 wherein said device access command is a device identification query, and said method further comprising the step of:

generating a device identification response according to resources assigned to the determined partition of said plurality of partitions.

16. The method of claim 10 wherein said device access command is a command to retrieve a virtual moveable medium, said method further comprising:

determining a physical moveable medium corresponding to said virtual moveable medium according to said determined partition.

17. A system for managing a tape library, said system comprising:
a robotics subsystem operable to retrieve tape cartridges and to place tape cartridges into tape elements;

a robotics controller said robotics controller comprising:

a processor for executing code;

code for receiving a command to access a resource of said tape library, wherein said command is addressed with a communication medium identifier;

code for determining a partition of a plurality of partitions utilizing said communication medium identifier; and

code for controlling said robotics subsystem utilizing at least said determined partition.

18. The system of claim 17 wherein said command to access a resource is received from a host system, and wherein said robotics controller further comprises:

code for determining whether said host system is authorized to access resources associated with said determined partition.

19. The system of claim 17 wherein said robotics controller receives two commands requesting access to a same resource, and wherein said robotics controller further comprises:

code for queueing received commands until a requested resource becomes available.

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20. The system of claim 17 further comprises:

a resource mapping table, wherein said resource mapping table maps system resources to partitions of said plurality of partitions.

21. The system of claim 20 wherein said robotics controller further comprises non-volatile memory, and wherein said resource mapping table is stored in said non-volatile memory.

22. The system of claim 17 further comprising:

a Fibre Channel switch, wherein said Fibre Channel switch is operable to route a plurality of messages associated with a plurality of Fibre Channel addresses to said robotics controller, and wherein each of said plurality of Fibre Channel addresses are associated with at least one partition of said plurality of partitions.

23. A controller for managing a moveable media library, said controller comprising:

a processor for executing instructions; and

non-volatile memory for storing at least:

code for controlling at least one robotic mechanics of a moveable media library; and

code for responding to commands received from host systems to retrieve a moveable medium of a plurality of moveable media of said moveable media library, said code for responding is operable to receive said commands addressed with multiple device identifiers according to a device access protocol, and said code for responding is operable to associate each device identifier of said multiple device identifiers with at least one respective library partition.